Grade 7

Released Items

7N2

Number Operations and Concepts - Understand ways to represent numbers, relationships among numbers, and number systems

Seth was given the following list of fractions.

$$\frac{1}{2}, \frac{1}{8}, \frac{2}{3}, \frac{5}{6}, \frac{3}{4}, \frac{1}{5}$$

Part A. In the space below, list these fractions in order from least to greatest. Show or explain how you got your answer.

Least to Greatest: _____, _____, _____, _____, _____, _____

_____

_____

_____

Part B. What is the difference between the value of the greatest fraction and the value of the least fraction in the list you made in Part A? Write your answer in the space below. Show or explain how you got your answer.

Difference in Value: _____

_____

_____

_____

7N3

Number Operations and Concepts - Develop the connection between conceptual understanding and computational proficiency

Barney taught a martial arts class with 25 students. He collected $68.55 in class fees from each student. What was the total amount that Barney collected in class fees?

A $1,713.75

B $1,750.00

C $1,960.55

D $2,742.00

7G1

Geometry - Specify locations and describe spatial relationships using coordinate geometry and other representational systems

7G2

Geometry - Analyze characteristics and properties of two- and three-dimensional geometric shapes

What is the sum of the measures of the interior angles of a rhombus?

A. 180°
B. 270°
C. 350°
D. 360°

Which 3–dimensional figure has two congruent, parallel bases?

A Cone
B Sphere
C Cylinder
D Pyramid

7G3

Geometry - Apply transformations and use symmetry to analyze mathematical situations

Marcy and Karen each have one card shaped like a rectangle.

- **Marcy's card has dimensions 2 inches by 4 inches.**
- **Karen's card is geometrically similar to Marcy's card.**
- **One of the dimensions of Karen's card is 3 inches.**

What could be the other dimension of Karen's card? Write your answer in the space below. Show or explain how you got your answer.

_____

_____

_____

7M1

Measurement - Understand measurable attributes of objects and the units, systems, and processes of measurement

Sara built a shelf that is 46 inches in length. What is the length of the shelf in feet and inches?

A 3 ft 4 in.

B 3 ft 10 in.

C 4 ft 1 in.

D 4 ft 6 in.

7M2

Measurement - Apply appropriate techniques, tools, and formulas to determine perimeter, area or volume

The circumference of a circle is 31.4 inches. What is the radius in inches of the circle? (Use $\pi \approx 3.14$) Write your answer in the space below. Show or explain how you got your answer.

Radius in Inches: _____

_____

_____

7A1

Algebra - Understand patterns, relations, and functions

What is the value of the expression below when $x = 2$?

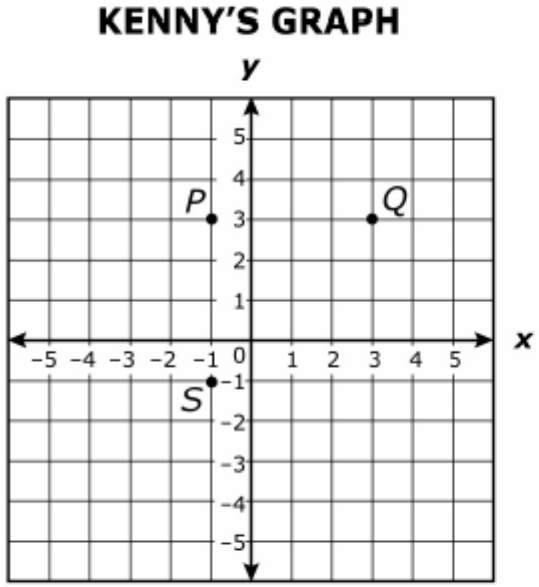
12

$$(3x + 9) \div 5 - x$$

A. 15
B. 5
C. 3
D. 1

7A2

Algebra - Use mathematical models to represent and understand quantitative relationships



Kenny is graphing square *PQRS* on the coordinate grid.

He has already graphed points *P*, *Q*, and *S*. Which best represents the coordinates of *R*, the fourth vertex of the square?

A . (–1, 3)

B . (–1, –3)

C . (3, –1)

D . (–3, –1)

Eliza has completed 28 of the 100 invitations she agreed to design. Which expression could be used to find the number of invitations she still needs to complete?

A 100 + 28

B 100 – 28

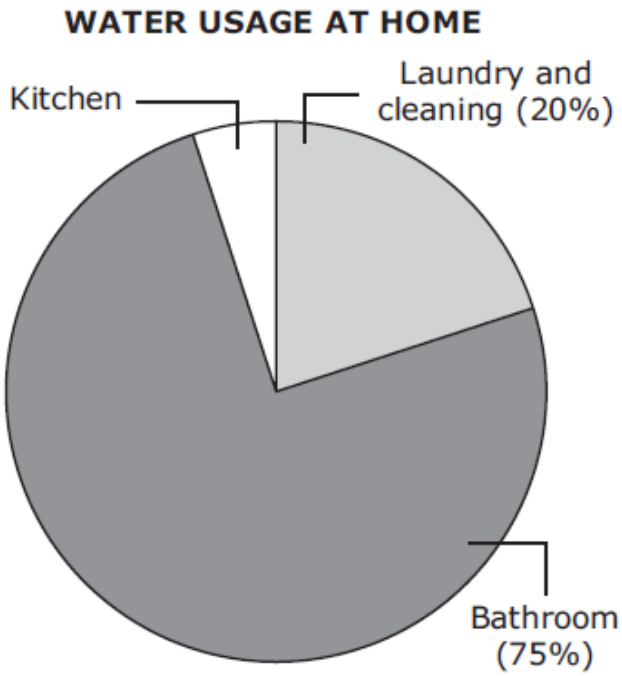
C 100 · 28

D 100 ÷ 28

7D1

Data Analysis and Probability - Collect, organize, and display relevant data to answer questions and use appropriate statistical methods to analyze the data

The graph below shows how water is used at Jane's home.



If Jane's family uses 1800 gallons of water each day, what is the total number of gallons of water used in the kitchen each day?

A. 90 gal.
B. 180 gal.
C. 900 gal
D. 1800 gal.

7D2

Data Analysis and Probability - Develop and evaluate inferences and predictions that are based on data

Jack has the following numbers of state quarters in his pocket.

- **3 Texas**
- **3 Georgia**
- **4 Minnesota**
- **2 North Carolina**
- **5 Massachusetts**

Part A. If Jack randomly selects 1 quarter from his pocket, what is the probability that he will select a Texas quarter? Write your answer in the space below. Show or explain how you got your answer.

Probability: _____

_____

_____

_____

Part B. Jack does not put the Texas quarter back into his pocket. If he randomly selects a second quarter, what is the probability that he will select a Minnesota quarter? Write your answer in the space below. Show or explain how you got your answer.

Probability: _____

_____

_____

_____